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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/978,515	10/15/2001	Richard N. Zare	M-11422-1P US	5049

36257 7590 06/04/2003

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EXAMINER

THERKORN, ERNEST G

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/978, SIS

Applicant(s)

ZARE

Examiner

THERKORN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 22, 2003
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above, claim(s) 12-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____.
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 10
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 102(A) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over each of Dulay (Analytical Chemistry, Vol 73, No. 16, August 15, 2001, page 3921-3926) and Kato (Journal of Chromatography, 924 (2001) 187-195). The claims are considered to read on each of Dulay (Analytical Chemistry, Vol 73, No. 16, August 15, 2001, page 3921-3926) and Kato (Journal of Chromatography, 924 (2001) 187-195). However, if a difference exists between the claims and each of Dulay (Analytical Chemistry, Vol 73, No. 16, August 15, 2001, page 3921-3926) and Kato (Journal of Chromatography, 924 (2001) 187-195), it would reside in optimizing the elements of each of Dulay (Analytical Chemistry, Vol 73, No. 16, August 15, 2001, page 3921-3926) and Kato (Journal of Chromatography, 924 (2001) 187-195). It would have been obvious to optimize the elements of

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each of Dulay (Analytical Chemistry, Vol 73, No. 16, August 15, 2001, page 3921-3926) and Kato (Journal of Chromatography, 924 (2001) 187-195) to enhance separation.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dulay (Anal. Chem. 1998, 70, 5103-5107 in view of Viklund (Chem. Mater. 1997, 9, 463-471), Woo (Bulletin of the Korean Chemical Society, Vol 16, No. 11 ISSN 0253-2964, 1995) and each of Nakanishi (U.S. Patent No. 5,624,875), Cabrera (U.S. Patent No. 6,398,962), and Holloway (U.S. Patent No. 6,210,570). The claims differ from Dulay (Anal. Chem. 1998, 70, 5103-5107 in reciting irradiating the mixture and a bonded phase. Viklund (Chem. Mater. 1997, 9, 463-471) (Abstract) discloses that the advantages of photoinitiated polymerization are ease of preparation, short time needed for reaction, and the possibility of running the reaction at a low temperature. Woo (Bulletin of the Korean Chemical Society, Vol 16, No. 11 ISSN 0253-2964, 1995) discloses that it is well known to photopolymerize silanes. Nakanishi (U.S. Patent No. 5,624,875) (column 1, lines 5-22, column 4, lines 25-30, column 6, line 63-column 7, line 5, and column 13, lines 30-33) discloses use of a bonded phase in a sol-gel column allows use of a shorter column. Cabrera (U.S. Patent No. 6,398,962) (column 3, line 33 and 56-67, column 11, line 36) discloses that bonding additional groups called separation effectors improves separation in a sol-gel column. Holloway (U.S. Patent No. 6,210,570) (column 3, lines 62-64 and column 8, lines 8-19) discloses use of a bonded phase in a sol-gel column allows tailoring to a variety of chromatographic separation. It would have been obvious to use photoinitiated polymerization in Dulay (Anal. Chem., 70, 1998 pages 5103-5107) because Viklund (Chem. Mater. 1997, 9, 463-471) (Abstract)

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discloses that the advantages of photoinitiated polymerization are ease of preparation, short time needed for reaction, and the possibility of running the reaction at a low temperature and Woo (Bulletin of the Korean Chemical Society, Vol 16, No. 11 ISSN 0253-2964, 1995) discloses that it is well known to photopolymerize silanes. It would have been obvious to use a bonded phase in Dulay (Anal. Chem., 70, 1998 pages 5103-5107) either because Nakanishi (U.S. Patent No. 5,624,875) (column 1, lines 5-22, column 4, lines 25-30, column 6, line 63-column 7, line 5, and column 13, lines 30-33) discloses use of a bonded phase in a sol-gel column allows use of a shorter column or because Cabrera (U.S. Patent No. 6,398,962) (column 3, line 33 and 56-67, column 11, line 36) discloses that bonding additional groups called separation effectors improves separation in a sol-gel column, or because Holloway (U.S. Patent No. 6,210,570) (column 3, lines 62-64 and column 8, lines 8-19) discloses use of a bonded phase in a sol-gel column allows tailoring to a variety of chromatographic separation.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Nakanishi (U.S. Patent No. 5,624,875), Cabrera (U.S. Patent No. 6,398,962), and Holloway (U.S. Patent No. 6,210,570) in view of Viklund (Chem. Mater. 1997, 9, 463-471) and Woo (Bulletin of the Korean Chemical Society, Vol 16, No. 11 ISSN 0253-2964, 1995). The claims differ from each of Nakanishi (U.S. Patent No. 5,624,875), Cabrera (U.S. Patent No. 6,398,962), and Holloway (U.S. Patent No. 6,210,570) in reciting irradiating the mixture. Viklund (Chem. Mater. 1997, 9, 463-471) (Abstract) discloses that the advantages of photoinitiated polymerization are ease of preparation, short time needed for reaction, and the possibility of

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running the reaction at a low temperature. Woo (Bulletin of the Korean Chemical Society, Vol 16, No. 11 ISSN 0253-2964, 1995) discloses that it is well known to photopolymerize silanes. It would have been obvious to use photoinitiated polymerization in each of Nakanishi (U.S. Patent No. 5,624,875), Cabrera (U.S. Patent No. 6,398,962), and Holloway (U.S. Patent No. 6,210,570) because Viklund (Chem. Mater. 1997, 9, 463-471) (Abstract) discloses that the advantages of photoinitiated polymerization are ease of preparation, short time needed for reaction, and the possibility of running the reaction at a low temperature and Woo (Bulletin of the Korean Chemical Society, Vol 16, No. 11 ISSN 0253-2964, 1995) discloses that it is well known to photopolymerize silanes.

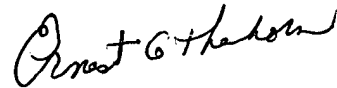
It would be appreciated if the publication dates of Quirino, "New Strategy for On-Line Preconcentration in Chromatographic Separation" and Quirino, "On-Line Preconcentration in Capillary Electrochromatography Using a Porous Monolith, Solvent Gradient and Sample Stacking" could be provided so that it may be determined whether the references may be used as prior art.

The remarks urge that there is no serious burden on the examiner to examine multiple inventions and species. However, examining additional inventions and species would require searching additional subclasses. The additional search and different issues of patentability would be an enormous burden on the examiner. As such, the restriction and election of species

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requirements have been reconsidered, deemed proper, and made final for the reasons of record.

Any inquiry concerning this communication should be directed to E. Therkorn at
telephone number (703) 308-0362.



Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT/12
May 28, 2003